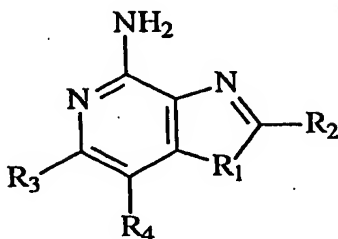


WE CLAIM:

1. A compound of the formula I:

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(I)

wherein:

R₁ is selected from the group consisting of oxygen, sulfur and selenium;

R₂ is selected from the group consisting of

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-hydrogen;

-alkyl;

-alkyl-OH;

-haloalkyl;

-alkenyl;

15

-alkyl-X-alkyl;

-alkyl-X-alkenyl;

-alkenyl-X-alkyl;

-alkenyl-X-alkenyl;

-alkyl-N(R₆)₂;

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-alkyl-N₃;

-alkyl-O-C(O)-N(R₆)₂;

-heterocyclyl;

-alkyl-X-heterocyclyl;

-alkenyl-X-heterocyclyl;

25

-aryl;

-alkyl-X-aryl;
-alkenyl-X-aryl;
-heteroaryl;
-alkyl-X-heteroaryl; and
-alkenyl-X-heteroaryl;

R₃ and **R₄** are each independently:

-hydrogen;
-X-alkyl;
-halo;
-haloalkyl;
-N(R₅)₂;

or when taken together, **R₃** and **R₄** form a fused aromatic, heteroaromatic, cycloalkyl or heterocyclic ring;

X is selected from the group consisting of -O-, -S-, -NR₅-, -C(O)-, -C(O)O-, -OC(O)-, and a bond; and

each **R₅** is independently H or C₁₋₈alkyl;

with the proviso that when **R₁** is sulfur, **R₃** is not -NH₂; or a pharmaceutically acceptable salt thereof.

2. A compound according to claim 1 wherein **R₁** is oxygen or sulfur.

3. A compound according to claim 1, wherein **R₃** and **R₄** are taken together to form a substituted or unsubstituted benzene ring.

4. A compound according to claim 2 wherein **R₃** and **R₄** are taken together to form a substituted or unsubstituted benzene ring.

5. A compound according to claim 1 wherein **R₃** and **R₄** are taken together to form a substituted or unsubstituted pyridine ring.

6. A compound according to claim 2 wherein R₃ and R₄ are taken together to form a substituted or unsubstituted pyridine ring.

7. A compound according to claim 1 wherein R₂ is C₁₋₄ alkyl.

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8. A compound according to claim 2 wherein R₂ is C₁₋₄ alkyl.

9. A compound according to claim 1 wherein R₁ is sulfur.

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10. A compound according to claim 9 wherein R₃ and R₄ are taken together to form a substituted or unsubstituted benzene ring.

11. A compound according to claim 10 wherein R₂ is C₁₋₄ alkyl.

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12. A compound according to claim 10 wherein R₂ is *n*-propyl.

13. 2-*n*-propylthiazolo[4,5-*c*]quinolin-4-amine, or a pharmaceutically acceptable salt thereof.

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14. A compound selected from the group consisting of:

2-methylthiazolo[4,5-*c*]quinolin-4-amine;

thiazolo[4,5-*c*]quinolin-4-amine;

2-ethylthiazolo[4,5-*c*]quinolin-4-amine;

2-propylthiazolo[4,5-*c*]quinolin-4-amine;

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2-pentylthiazolo[4,5-*c*]quinolin-4-amine;

2-butylthiazolo[4,5-*c*]quinolin-4-amine;

2-(1-methylethyl)thiazolo[4,5-*c*]quinolin-4-amine;

2-(2-phenyl-1-ethenyl)thiazolo[4,5-*c*]quinolin-4-amine;

2-(2-phenyl-1-ethyl)thiazolo[4,5-*c*]quinolin-4-amine;

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2-(4-aminothiazolo[4,5-*c*]quinolin-2-yl)-1,1-dimethylethyl carbamate;

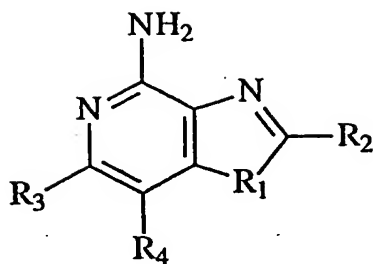
2-(ethoxymethyl)thiazolo[4,5-*c*]quinolin-4-amine;

2-(methoxymethyl)thiazolo[4,5-c]quinolin-4-amine;
2-(2-methylpropyl)thiazolo[4,5-c]quinolin-4-amine;
2-benzylthiazolo[4,5-c]quinolin-4-amine;
8-methyl-2-propylthiazolo[4,5-c]quinolin-4-amine;
5 (4-aminothiazolo[4,5-c]quinolin-2-yl)methanol;
2-methyloxazolo[4,5-c]quinolin-4-amine;
2-ethyloxazolo[4,5-c]quinolin-4-amine;
2-butyloxazolo[4,5-c]quinolin-4-amine;
2-propylthiazolo [4,5-c] quinolin-4,8-diamine;
10 2-propyloxazolo [4,5-c] quinolin-4-amine;
8-bromo-2-propylthiazolo[4,5-c]quinolin-4-amine;
7-methyl-2-propylthiazolo[4,5-c]quinolin-4-amine;
2-butyl-7-methyloxazolo[4,5-c]quinolin-4-amine;
7-methyl-2-propyloxazolo[4,5-c]quinolin-4-amine;
15 7-fluoro-2-propyloxazolo[4,5-c]quinolin-4-amine;
7-fluoro-2-propylthiazolo[4,5-c]quinolin-4-amine;
2-propyl-7-(trifluoromethyl)thiazolo[4,5-c]quinolin-4-amine;
2-(4-morpholino)thiazolo[4,5-c]quinolin-4-amine;
2-(1-pyrrolidino)thiazolo[4,5-c]quinolin-4-amine;
20 2-butylthiazolo[4,5-c][1,5]naphthyridin-4-amine;
2-propylthiazolo[4,5-c][1,5]naphthyridin-4-amine;
7-chloro-2-propylthiazolo[4,5-c]quinolin-4-amine;
7-methoxy-2-propylthiazolo[4,5-c]quinolin-4-amine;

and pharmaceutically acceptable salts thereof.

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15. A pharmaceutical composition comprising a therapeutically effective amount of a compound of Formula I(a):



I(a)

wherein:

R_1 is selected from the group consisting of oxygen, sulfur and selenium;

R_2 is selected from the group consisting of

5

-hydrogen;

-alkyl;

-alkyl-OH;

-haloalkyl;

-alkenyl;

10

-alkyl-X-alkyl;

-alkyl-X-alkenyl;

-alkenyl-X-alkyl;

-alkenyl-X-alkenyl;

-alkyl-N(R_5)₂;

15

-alkyl-N₃;

-alkyl-O-C(O)-N(R_5)₂;

-heterocyclyl;

-alkyl-X-heterocyclyl;

-alkenyl-X-heterocyclyl;

20

-aryl;

-alkyl-X-aryl;

-alkenyl-X-aryl;

-heteroaryl;

-alkyl-X-heteroaryl; and

25

-alkenyl-X-heteroaryl;

R_3 and R_4 are each independently:

-hydrogen;

-X-alkyl;

-halo;

5 -haloalkyl;

-N(R_5)₂;

or when taken together, R_3 and R_4 form a fused

aromatic, heteroaromatic, cycloalkyl or heterocyclic ring;

10 X is selected from the group consisting of -O-, -S-, -NR₅-, -C(O)-, -C(O)O-, -OC(O)-, and a bond; and

each R_5 is independently H or C₁₋₈ alkyl; or a pharmaceutically acceptable salt thereof, with a pharmaceutically acceptable carrier.

15 16. A method of inducing cytokine biosynthesis in a mammal comprising administering a composition of claim 15 to the mammal.

17. The method of claim 16 wherein the cytokine comprises IFN- α .

18. The method of claim 16 wherein the cytokine comprises TNF- α .

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19. The method of claim 16 wherein the composition is administered topically.

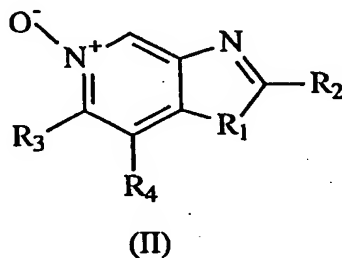
25 20. A method of treating a viral disease in a mammal comprising administering a composition of claim 15 to the mammal.

21. The method of claim 20 wherein the composition is administered topically.

30 22. A method of treating a neoplastic disease in a mammal comprising administering a composition of claim 15 to the mammal.

23. The method of claim 22 wherein the composition is administered topically.

5 24. A compound of the formula II:



wherein

R_1 is selected from the group consisting of oxygen, sulfur and selenium;

10 R_2 is selected from the group consisting of

- hydrogen;
- alkyl;
- alkyl-OH;
- haloalkyl;
- 15 -alkenyl;
- alkyl-X-alkyl;
- alkyl-X-alkenyl;
- alkenyl-X-alkyl;
- alkenyl-X-alkenyl;
- 20 -alkyl-N(R_5)₂;
- alkyl-N₃;
- alkyl-O-C(O)-N(R_5)₂;
- heterocyclyl;
- alkyl-X-heterocyclyl;
- 25 -alkenyl-X-heterocyclyl;
- aryl;

-alkyl-X-aryl;
 -alkenyl-X-aryl;
 -heteroaryl;
 -alkyl-X-heteroaryl;
 -alkenyl-X-heteroaryl;
 -SO₂CH₃; and
 -CH₂-O-C(O)-CH₃;

R₃ and **R₄** are each independently:

-hydrogen;
 -X-alkyl;
 -halo;
 -haloalkyl;
 -N(R₅)₂;

or when taken together, **R₃** and **R₄** form a fused
 aromatic, heteroaromatic, cycloalkyl or heterocyclic ring;

X is selected from the group consisting of -O-, -S-, -NR₅-, -C(O)-,
 -C(O)O-, and a bond; and
 each **R₅** is independently H or C₁₋₈alkyl.

- 20 25. A compound selected from the group consisting of:
- 2-methylthiazolo[4,5-c]quinoline-5N-oxide;
 2-ethylthiazolo[4,5-c]quinoline-5N-oxide;
 2-propylthiazolo[4,5-c]quinoline-5N-oxide;
 2-pentylthiazolo[4,5-c]quinoline-5N-oxide;
 25 2-butylthiazolo[4,5-c]quinoline-5N-oxide;
 2-(1-methylethyl)thiazolo[4,5-c]quinoline-5N-oxide;
 2-(2-phenyl-1-ethenyl)thiazolo[4,5-c]quinoline-5N-oxide;
 2-phenylethylthiazolo[4,5-c]quinoline-5N-oxide;
 2-methyl-1-thiazolo[4,5-c]quinolin-2-yl-2-propanol-5N-oxide;
 30 2-(ethoxymethyl)thiazolo[4,5-c]quinoline-5N-oxide;
 2-(methoxymethyl)thiazolo[4,5-c]quinoline-5N-oxide;

2-(2-methylpropyl)thiazolo[4,5-c]quinoline-5N-oxide;
2-benzylthiazolo[4,5-c]quinoline-5N-oxide;
8-methyl-2-propylthiazolo[4,5-c]quinoline-5N-oxide; and
2-butyloxazolo[4,5-c]quinoline-5N-oxide.